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Please find below and/or attached an Office communication concerning this application or proceeding.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _27 February 2004_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-4 and 6-24_ is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-4 and 6-24_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☒ All   b)☐ Some *   c)☐ None of:

         1.☒ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
     Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

FINAL DETAILED ACTION

Response to Amendment

1.   The amendment filed on 27 February 2004 has been considered. Before claims 1-4 and

6-19 were pending and now claims 1-4 and 6-24 are pending. Claims 1, 15 and 18 have been

amended and new claims 20-24 have been added.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 6, and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Matsuzaki et al. (hereinafter "Matsuzaki"), US 5,926,159 in view of Ono et al. (hereinafter

"Ono"), US 6.075.508.

As pertaining to claims 1 and 6, Matsuzaki discloses a liquid crystal display which has

a liquid crystal display section 17, that uses a FLC or ferroelectric liquid crystal, in which the LC

has storage characteristic (col. 1, lines 37-49), this can be construed as memory effect because

it has the same characteristics and functions as memory effect; a driving section 26 which

drives the display section 17 (col. 4, lines 32-42); a control section 27 which controls to write

currently displayed information on the display again at a specified time (col. 4, line 32-col. 5, line

40). Furthermore, Matsuzaki discloses the control section 27 causes the driving section 26 to

rewrite currently displayed information on the display section 17 upon the timers or counters 28

and 29 counting to a predetermined value (col. 4, line 32-col. 5, line 40).

As pertaining to claims 1 and 6, Matsuzaki does not disclose specifically a timer for

detecting time elapsing and the timer beginning counting when information displayed on the

display section is updated and the timer counting to a predetermined value corresponding to a predetermined period of time.

As pertaining to claims 1 and 6, Ono discloses a display control apparatus in which a refresh driving and partial rewrite driving for updating the display. A timer counts a time during which a rewrite operation in the VRAM is not performed. When a predetermined count time has elapsed, the CPU sends a signal representing the continuous number of display lines to the addressing generator to perform refresh display (col. 2, lines 52-67; col. 3, lines 1-5; col. 7, lines 49-58).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the display control apparatus of Ono with Matsuzaki.

The suggestion/motivation for doing so would have been to provide an LCD that is able to keep an image on the display or screen by using memory effect, thereby using less power, and a timer, in conjunction with memory effect, that is used to update the last image on the display when the timer has counted to a predetermined value. This process or method is great because it would save or at least allow the LCD to have a longer "life" or to be used longer because considerable power is saved by the use of memory effect and the timer. Furthermore, the information on the display or the speed at which the information can be displayed on the screen can also be increased due to the partial rewriting operation.

As pertaining to claim 20, it would be obvious that when the timer is counting down to a predetermined number that the image would automatically be refreshed whether an input is made or not. If an input is not made, the display would refresh the image on the screen once the timer has counted down to a predetermined number. If an input is made in order to refresh the screen then once that is input is made and the timer starts to count down again it would

refresh the image again. Claim 20 is dependent on claim 1 and is rejected on the same basis

and what is stated above.

As pertaining to claim 21, it is inherently known when an LCD uses a LC that has

memory effect, that when the power or voltage is cut-off to the display an image is still kept on

the screen due to the memory effect in LC and the voltage being kept on in order to display the

image, but once the voltage or power is turned off the image is still kept on the screen. So by

that trait, in order for the image to be refreshed, a voltage must be applied to the LC to activate

the LC and pixels and thus the image can be refreshed. So in this case, once the timer has

counted down to a predetermined number, the power would be restored and the image would

be refreshed. Claim 21 is dependent on claim 1 and is rejected on the same basis and what is

stated above.

3.   **Claims 2 and 16-17** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Matsuzaki and Ono as applied to claim 1 above, and further in view of Huang, US 6,268,840.

As pertaining to claim 2, Matsuzaki and Ono disclose what has previously been stated

above.

As pertaining to claim 2, they do not disclose the use of chiral nematic liquid crystal,

which exhibits a cholesteric phase, in the liquid crystal display device.

As pertaining to claim 2, Huang discloses a visual display that uses bistable chiral

nematic liquid crystal that exhibits a cholesteric phase (col. 1, lines 17-22, col. 1, lines 30-31).

At the time the invention was made, it would have been obvious to a person of ordinary

skill in the art to combine the bistable chiral nematic liquid crystal of Huang with the LC of

Matsuzaki and Ono.

The suggestion/motivation for doing so would have been to provide an apparatus that is

better suitable to use bistable chiral nematic liquid crystal than ferroelectric. Most displays that

use a liquid crystal, which exhibit a cholesteric phase typically use chiral nematic liquid crystal. With the use of chiral nematic liquid crystal and memory effect, the liquid crystal device would not have to be continuously refreshed or updated or rewritten. Furthermore, when using chiral nematic liquid crystal, it takes a lot less time to refresh or update the screen. Thus the art of saving power is maximized. It is known that chiral nematic liquid crystal is usually used for large display apparatus's, but to be able to expand this idea to smaller display apparatus such as personal digital assistant's (PDA's) and laptop would very marketable since many consumers now buy PDA's and laptop for personal and business usage. Claim 2 is dependent on claim 1 and is rejected on the same basis and what is stated above.

As pertaining to claim 16-17, it is inherently known, well known in the art and the examiner takes Official Notice that when cholesteric LC is used the display section will reset the pixels and come to a focal conic state. Furthermore, it is inherently known, well known in the art and the examiner take Official Notice that when cholesteric LC is used the display section will reset by applying a pulse voltage to untwist the liquid crystal which exhibits a cholesteric phase to each pixel. Also, by applying a voltage to untwist the liquid crystal, this is another way of saying the pixels are to come to a focal conic state. Claim 16-17 are dependent on claim 1 and are rejected on the same basis and what is stated above.

4.   **Claim 3-4** are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki and Ono as applied to claim 1 above, and further in view of Guscott et al. (hereinafter "Guscott"), US 4,728,936.

As pertaining to claims 3-4, Matsuzaki and Ono disclose what has previously been stated above.

As pertaining to claims 3-4, they do not disclose: a) **as pertaining to claim 3**, a detecting section which detects a contact action with the screen and having a control section

that controls the driving section to write currently displayed information on the display again when a contact is detected, b) **as pertaining to claim 4**, a touch sensor.

As pertaining to claims 3-4, Guscott discloses: a) **as pertaining to claim 3**, an apparatus that is a touch pad display device (col. 3, lines 8-10), when the display is touched a set of displayed symbols is produced or reproduced (col. 1, lines 58-68, col. 2, lines 1-20 and col. 4, lines 40-48), b) **as pertaining to claim 4**, it is inherently known that a device that is either a touch panel or touch screen or has a touch pad contains a touch sensor matrix or a touch sensitive matrix (col. 2, lines 21-26).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the touch pad display device of Guscott with Matsuzaki and Ono.

The suggestion/motivation for doing so would have been to provide a liquid crystal display device that can be touched to either input information or to obtain information. Furthermore, with the use of memory effect, a user is able to write or obtain information via the touch pad and the information will not be distorted or ruined when the display is touched. This idea is already used for personal computers, laptops and PDA's that have screen savers. Claims 3-4 are dependent on claim 1 and are rejected on the same basis and what is stated above.

5.   **Claims 7-9 and 12-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki and Ono as applied to claim 1 above, and further in view of Chikako, JP 08-035759.

As pertaining to claims 7-9 and 12-13, Matsuzaki and Ono disclose what has previously been stated above.

As pertaining to claims 7-9 and 12-13, they do not disclose: a) referring to **claim 7**, explicitly where the power originates from, b) referring to **claim 8**, a secondary battery and an external device that is able to recharge the secondary battery by use of terminals, c) referring to

claim 9 and 13, the external device is disclosed to be refrigerator and d) referring to **claim 12**, the liquid crystal display device is functionally able to be attached and detached from the an external device.

As pertaining to claims 7-9 and 12-13, Chikako discloses: a liquid crystal display device (paragraph 0014), a) as pertaining to **claim 7**, an electric power source (paragraph 0010), b) as pertaining to **claim 8**, a device is able to recharge a battery with the use of AC power (paragraph 0010), c) as pertaining to **claims 9 and 13**, an external device as refrigerator (paragraph 0001), d) as pertaining to **claim 12**, a device that is attachable and detachable to an external device (paragraphs 0018, 0021 and 0026).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the liquid crystal display device, that has an electric power source, it is able to recharge a secondary battery from the electric power source that originates from a refrigerator and is able to be attached and detached from a refrigerator of Chikako with Matsuzaki and Ono.

The suggestion/motivation for doing so would have been to provide an apparatus that can used for displaying, writing or scanning and is capable of functioning with or without the electric power from a refrigerator. Also, this apparatus is able to function away from the refrigerator as a stand alone unit, thus allowing it to used much like a personal digital assistant (PDA) or a laptop. The future of technology is only getting better and many consumers like devices that function like computers but a fraction of the size and the kitchen is a perfect place since it's one of rooms in a house in which everybody visits at a consistent basis. Claims 7-9 and 12-13 are dependent on claim 1 and are rejected on the same basis and what is stated above.

6.   **Claims 10-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue, Matsuzaki, Ono and Chikako as applied to claims 1 or 7 above, and further in view of Callahan, Jr. et al. (hereinafter "Callahan"), US 5,726,676 and Nakanishi, US 6,323,851 B1.

As pertaining to claims 10-11, Matsuzaki, Ono and Chikako disclose what has previously been stated above.

As pertaining to claims 10-11, they do not disclose: a) **as pertaining to claim 10**, a control section that stops the supply of electric power after writing, b) **as pertaining to claim 11**, a booster circuit that raises the voltage and applies it to the display section and a control section that stops the supply of electric power to the booster circuit.

As pertaining to claims 10-11 Callahan discloses signal driver circuit for a liquid crystal display: a) **as pertaining to claims 10-11**, a power standby mode, in which the signal driver controls the data to be written to the display and after the data has been delivered powers down (col. 5, lines 11-15, col. 6, lines 35-44) and Nakanishi discloses a liquid crystal display device: b) **as pertaining to claim 11**, a booster circuit that raises the voltage to drive the LCD (col. 1, lines 13-29, col. 4, lines 34-42 and Figure 2, #210).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the signal driver circuit of Callahan and the booster circuit of Nakanishi with Matsuzaki, Ono and Chikako.

The suggestion/motivation for doing so would have been to provide a liquid crystal display device that is able to conserve power more efficiently. As pertaining to claim 10, once the drivers write or obtain information to the display, the drivers will power down. With the help of memory effect or memory effect characteristics the information is kept on the display for a predetermine amount of time. Thus, the device does not have to keep powering up the drivers to refresh or rewrite the screen. As pertaining to claim 11, to incorporate a booster circuit would

be beneficial. With the help of a booster circuit the drivers are able to write, rewrite, refresh or obtain information to the display much faster then going through a process in which the drivers have to continuously find or generate a certain voltage or voltages to drive the display. Also by incorporating the idea of powering down or inactivating the booster circuit after the drivers have feed the information to the display and using memory effect or memory effect characteristics the drivers would not have to be powered up or kept on all the time to keep the information displayed. Thus, saving power. Claims 10-11 are dependent on claims 1 and 7 and are rejected on the same basis and what is stated above.

7.   **Claims 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki and Ono as applied to claim 1 above, and further in view of Adler et al. (hereinafter "Adler"), US 6,342,901 B1.

      As pertaining to claim 14, Matsuzaki and Ono disclose what has previously been stated above.

      As pertaining to claim 14, they do not disclose a liquid crystal display device that is able to get a calendar, recipe, picture and data from outside, assuming that outside refers to information not already stored in memory within the device.

      As pertaining to claim 14, Adler discloses a portable device that is networked to remote or main processor that is able to obtain different types of information, whether it be email, a calendar, a picture or anything else (col. 4, lines 29-33, col. 4, lines 46-56, col. 6, lines 17-25) and is able to scan in data manually (col. 27, lines 56-67 and col. 28, lines 1-18 and Figure 24, #2416, Figure 25, #2510).

      At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the portable device of Adler et al. with Matsuzaki and Ono.

The suggestion/motivation for doing so would have been to provide one single device

that is able to receive and store information from different entities. To have a device that is able

to receive and store the information of food contents, i.e. dates, a calendar, email, download

images, i.e. pictures, recipes etc. is very useful in today's society. Also, by making this device

portable it is very practical because it allows a person the flexibility of receiving and storing

information within a close proximity while in the kitchen or around the house, much like a PDA,

but not as cumbersome as a personal computer or laptop. Claim 14 is dependent on claim 1

and is rejected on the same basis and what is stated above.

8.   **Claim 15** is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki in

view of Ono and further in view of Kondoh, US 6,008,787.

As pertaining to claim 15, Matsuzaki discloses a liquid crystal display which has a

liquid crystal display section 17, that uses a FLC or ferroelectric liquid crystal, in which the LC

has storage characteristic (col. 1, lines 37-49), this can be construed as memory effect because

it has the same characteristics and functions as memory effect; a driving section 26 which

drives the display section 17 (col. 4, lines 32-42); a control section 27 which controls to write

currently displayed information on the display again at a specified time (col. 4, line 32-col. 5, line

40). Furthermore, Matsuzaki discloses the control section 27 causes the driving section 26 to

rewrite currently displayed information on the display section 17 upon the timers or counters 28

and 29 counting to a predetermined value (col. 4, line 32-col. 5, line 40).

As pertaining to claim 15, Matsuzaki does not disclose the control section causes the

display section to be reset before the driving section rewrites currently displayed information

upon the time counting to a predetermined value.

As pertaining to claim 15, Ono discloses a display control apparatus in which a refresh

driving and partial rewrite driving for updating the display. A timer counts a time during which a

rewrite operation in the VRAM is not performed. When a predetermined count time has elapsed, the CPU sends a signal representing the continuous number of display lines to the addressing generator to perform refresh display (col. 2, lines 52-67; col. 3, lines 1-5; col. 7, lines 49-58).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the display control method of Ono with that of Matsuzaki.

The suggestion/motivation for doing so would have been to provide an LCD that is able to keep an image on the display or screen by using memory effect, thereby using less power, and a timer, in conjunction with memory effect, that is used to update the last image on the display when the timer has counted to a predetermined value. This process or method is great because it would save or at least allow the LCD to have a longer "life" or to be used longer because considerable power is saved by the use of memory effect and the timer. Furthermore, the information on the display or the speed at which the information can be displayed on the screen can also be increased due to the partial rewriting operation.

As pertaining to claim 15, Kondoh discloses resetting of the all the pixels simultaneously each time a pixel is rewritten. Therefore, when the pixels are rewritten they are all reset so when another rewrite happens the pixels will have already been reset (col. 4, line 59-col. 5, line 4).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the resetting of the pixels of Kondoh with the partial rewrite/refresh of Ono and Matsuzaki.

The suggestion/motivation for doing so would have been to provide for a better display that allows for high speed driving because the speed of rewriting or refreshing an image is increased substantially because all of the pixels are being reset then rewritten or refreshed

compared to resetting a row of pixels then rewriting or refreshing and then continuing on with

the next row and so forth. Also, the display is able to save power because it uses a storage

medium, that is similar to memory effect, within the liquid crystal.

9.   **Claim 18** is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki in

view of Unno et al. (hereinafter "Unno"), US 6,233,027 B1 and further in view of Ono.

As pertaining to claim 18, Matsuzaki discloses a liquid crystal display which has a

liquid crystal display section 17, that uses a FLC or ferroelectric liquid crystal, in which the LC

has storage characteristic (col. 1, lines 37-49), this can be construed as memory effect because

it has the same characteristics and functions as memory effect; a driving section 26 which

drives the display section 17 (col. 4, lines 32-42); a control section 27 which controls to write

currently displayed information on the display again at a specified time (col. 4, line 32-col. 5, line

40). Furthermore, Matsuzaki discloses the control section 27 causes the driving section 26 to

rewrite currently displayed information on the display section 17 upon the timers or counters 28

and 29 counting to a predetermined value (col. 4, line 32-col. 5, line 40).

As pertaining to claim 18, Matsuzaki does not disclose a) stacked layers comprising a

first substrate which is flexible which a viewer may view currently displayed information, a

second substrate and a liquid crystal material in between the two substrates, the plurality of

layers being stacked such that the first substrate in a layer is positioned closer to a viewer side

than the second substrate of the layer and specifically a timer for detecting time elapsing, the

time beginning counting when information displayed on the display section is updated.

As pertaining to claim 18, Unno discloses a liquid crystal device with substrates 2 and

3 maybe flexible substrates and also the liquid crystal disposed in between the two substrates

(col. 5, lines 30-34; fig. 2).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the flexible substrate of Unno with Matsuzaki.

The suggestion/motivation for doing so would have been to provide for a better LCD in which the flexible substrate can act as another polarizer or allow the LCD to be used as a touch panel and to reduce weight of the panel. Therefore if used a touch panel it would not be as hard to activate a touch sensor. Most flat panels today have a flexible substrate, in which they replace the glass panel. This allows the panel to be considerably lighter in weight. Thus when used on surface, i.e. wall, refrigerator, etc., the weight of the display is reduced because the glass substrate has been removed, thus it is easier to "hang" or to be attached to that surface. Flexible substrates are commonly used on laptop computers.

As pertaining to claim 18, Ono discloses a display control apparatus in which a refresh driving and partial rewrite driving for updating the display. A timer counts a time during which a rewrite operation in the VRAM is not performed. When a predetermined count time has elapsed, the CPU sends a signal representing the continuous number of display lines to the addressing generator to perform refresh display (col. 2, lines 52-67; col. 3, lines 1-5; col. 7, lines 49-58).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the display control apparatus of Ono with Inoue.

The suggestion/motivation for doing so would have been to provide an LCD that is able to keep an image on the display or screen by using memory effect, thereby using less power, and a timer, in conjunction with memory effect, that is used to update the last image on the display when the timer has counted to a predetermined value. This process or method is great because it would save or at least allow the LCD to have a longer "life" or to be used longer because considerable power is saved by the use of memory effect and the timer. Furthermore,

the information on the display or the speed at which the information can be displayed on the screen can also be increased due to the partial rewriting operation.

10.   **Claims 19 and 23-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki et al. (hereinafter "Matsuzaki"), US 5,926,159 in view of Taka, US 6,085,047.

As pertaining to claim 19, Matsuzaki discloses a liquid crystal display which has a liquid crystal display section 17, that uses a FLC or ferroelectric liquid crystal, in which the LC has storage characteristic (col. 1, lines 37-49), this can be construed as memory effect because it has the same characteristics and functions as memory effect; a driving section 26 which drives the display section 17 (col. 4, lines 32-42); a control section 27 which controls to write currently displayed information on the display again at a specified time (col. 4, line 32-col. 5, line 40). Furthermore, Matsuzaki discloses the control section 27 causes the driving section 26 to rewrite currently displayed information on the display section 17 upon the timers or counters 28 and 29 counting to a predetermined value (col. 4, line 32-col. 5, line 40).

As pertaining to claim 19, Matsuzaki does not disclose a manual operating member operable by a user, in which when depressed it rewrites currently displayed information on the display section.

As pertaining to claim 19, Taka discloses using a camera in which when a desired picture is preferred the buttons are released and the image is rewritten (col. 15, lines 41-51).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the rewrite function of Taka with that of Matsuzaki.

The suggestion/motivation for doing so would have been to provide for a system to have the option of allowing the user to rewrite or refresh the screen when desired. This allows the overall system to save power because it is not constantly being rewritten or refreshed.

As pertaining to claim 23, it is obvious that Taka discloses an operating member for

the sole purpose of refreshing or rewriting an image on a display (col. 15, lines 41-51). Claim

23 is dependent on claim 19 and is dependent on the same basis and what is stated above.

As pertaining to claim 24, it would be obvious that when a specified time is reached

the image would automatically be refreshed whether an input is made or not. If an input is not

made, the display would refresh the image on the screen once the specified time has reached

predetermined number. If an input is made in order to refresh the screen then once that is input

is made and to reach the specified time again, would be to start the count down again it would

refresh the image again. Claim 24 is dependent on claim 19 and is rejected on the same basis

and what is stated above.

11.   **Claim 22** is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzaki and

Ono as applied to claim 1 above, and in view of Taka, US 6,085,047.

As pertaining to claim 22, Matsuzaki and Ono disclose what has previously been

stated above.

As pertaining to claim 22, they do not disclose a manual operating member operable

by a user, in which when depressed it rewrites currently displayed information on the display

section.

As pertaining to claim 22, Taka discloses using a camera in which when a desired

picture is preferred the buttons are released and the image is rewritten (col. 15, lines 41-51).

At the time the invention was made, it would have been obvious to a person of ordinary

skill in the art to combine the rewrite function of Taka with that of Matsuzaki and Ono.

The suggestion/motivation for doing so would have been to provide for a system to have

the option of allowing the user to rewrite or refresh the screen when desired. This allows the

overall system to save power because it is not constantly being rewritten or refreshed. Claim 22

is dependent on claim 1 and is rejected on the same basis and what is stated above.

Response to Arguments

12.   Applicant's arguments with respect to claims 1-4, 6-18 and 20-22 have been considered

but are moot in view of the new ground(s) of rejection. With regards to applicant's arguments

on pages 10-12 that pertain to a timer for detecting time elapsing and reaching a predetermined

number for updating or rewriting or refreshing an image, the examiner has used Ono in which

Ono discloses a display control apparatus in which a refresh driving and partial rewrite driving

for updating the display. A timer counts a time during which a rewrite operation in the VRAM is

not performed. When a predetermined count time has elapsed, the CPU sends a signal

representing the continuous number of display lines to the addressing generator to perform

refresh display (col. 2, lines 52-67; col. 3, lines 1-5; col. 7, lines 49-58). When Ono is combined

with Matsuzaki they are able to reject the claimed invention.

Applicant's arguments have been fully considered but they are not persuasive with

respect to claims 19 and 23-24. With regards to applicant's argument on page 12 that pertain to

the manual operating member, the examiner disagrees with the applicant's because Taka does

disclose a manual operating member for updating a picture. According to Taka, Here, the user

chooses a record number for the image desired to be rewritten of the special memory 12. The

procedure starts when the up button UP or the down button DWN is pushed down in the status

ST 14. As the number of times the depression of the up button UP or the down button DWN

has been repeated increases, the record number of the special memory 12 is increased or

decreased. After the desired value of the record number for the image to be rewritten has been

sought out, the user removes his finger from the special button SPC, thus returning to the status

ST 14. A first step S230 reads the j-th recorded image of the special memory 12 and displays it

in blinking form on the image display device 18. Therefore, Taka does disclose and manual

operating member for updating, rewriting or refreshing an image. Also, these buttons are used

specifically for this function.

Conclusion

13.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant

is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

Any inquiry concerning this communication or earlier communications from the examiner

should be directed to **Michael J. Moyer** whose telephone number is **(703) 305-2099.** The

examiner can normally be reached Monday-Friday, 8:30am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, **Steven Saras**, can be reached at **(703) 305-9720.**

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to: (703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA,

Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the **Technology Center 2600 Customer Service Office whose**

telephone number is (703) 306-0377.

Michael J. Moyer
Examiner
Art Unit 2675

MJM
March 8, 2004

DENNIS-DOON CHOW
PRIMARY EXAMINER